



Seattle Labor Temple

Landmarks Preservation Board - Certificate of Approval

September 10, 2020





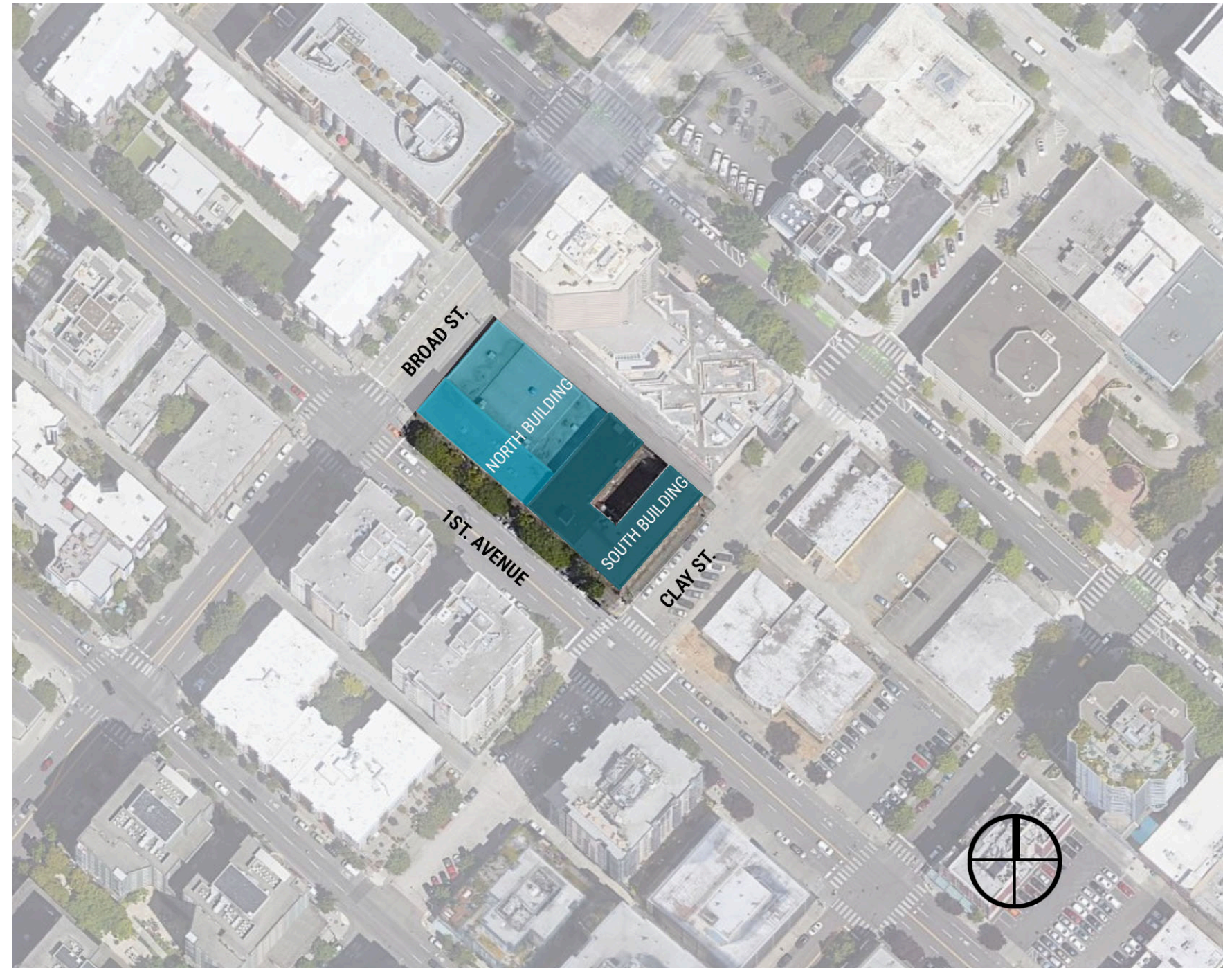
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BUILDING CONTEXT

SERIES 590X STEEL REPLICA WINDOW



One of the historic replica market’s most persistent challenges is trading occupant comfort for slim sightlines. Most companies focus solely on minimizing sightlines to the point building occupants are left sitting next to a beautiful but ultimately inferior window with limited usability and insufficient performance for long-term use. This approach works well where there are buildings without occupants.

EFCO’s 590X steel replica solves this challenge through balancing occupant comfort with minimal sightlines desired by the architectural and historic preservation communities. Alongside the 590X stands EFCO’s 65+ years of window manufacturing experience. We’ve learned a thing or two through the years and can provide a full product offering, including extensive window accessories developed specifically for the historic market. Additional services available are: pre-sale design and engineering support, installation training, energy analysis of the building envelope and a technically superior sales force you can consult with to find solutions for the most challenging applications.

| | | | |
|--|--|---|--|
| AAMA RATING (A440) FX: AW100 PO: AW80 | | STRUCTURAL LOAD (ASTM E330) FX: +/- 150 PSF PO: +/- 120 PSF | |
| AIR INFILTRATION (ASTM E283) FX: < 0.10 CFM/FT² PO: < 0.10 CFM/FT² | | WATER RESISTANCE (ASTM E547 & E331) FX: 15 PSF PO: 15 PSF | |
| U-FACTOR* (ANSI/NFRC 100/200) FX: 0.18 - 0.52 PO: 0.30 - 0.62 | | CRF (AAMA 1503) FX: 70 PO: 66 | |
| STC* (ASTM E90 & E413) FX: 25-37 PO: 24-36 | | OITC* (ASTM E90 & E413) FX: 23-32 PO: 21-30 | |
| FORCED ENTRY (ASTM F588 OR F842) TYPE B: GRADE 40 | | ACCESSIBILITY (AAMA 513) PO & CASEMENT OUT | |

STANDARD FEATURES

- System depth: 3-1/4"
- Dry-glazed with heel bead: Can remove glass from building interior
- Integral water management: Any water penetrating past weather-stripping is redirected to building exterior
- Up to 1 - 3/8" glass thickness: Quieter interior environment
- Customizable perimeter and intermediate grid: Economic grid customization to match existing sightlines
- Tested to AAMA 513: Easier window operation for the elderly and disabled

ALL TEST NUMBERS LISTED ARE ANTICIPATED PERFORMANCE. FINAL TESTING RESULTS WILL BE AVAILABLE JULY 1, 2020

* Performance dependent on glass selection. Please contact your EFCO sales rep for project specific performance.



PROPOSED WINDOW PRODUCT | EFCO CORPORATION

Series 590 Thermal
2 7/16" Heavy Commercial Fixed & Projected Replication Window



CONFIGURATIONS
Casement Out • Projected Out • Fixed
Series 590 is designed to replicate the “putty glazed” appearance of steel windows, the 590 window system is an attractive product for a wide range of applications. Thermal barriers in the frame improve thermal performance enhancing energy saving potential. Offered with a complete line of sub frames, mullions and architectural sills the 590 window provides the complete solution for your fenestration needs.

Features

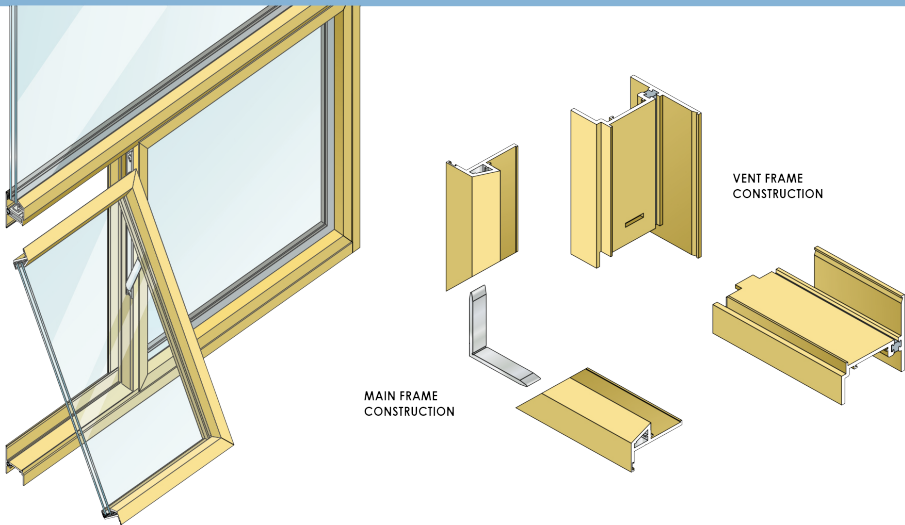
- Thermal barrier in vent/sash and frame
- Angle reinforced vent corners
- Vertical or horizontal stacking members
- Pressure equalization
- Wide variety of locking and operating hardware available
- Screen frames of extruded aluminum alloy are available
- Accessory line of subframes, mullions, and architectural sills
- Anodized and painted finishes available

Benefits

- Improves thermal performance
- Enhances energy saving potential
- Improves sash/vent rigidity
- Increases configuration options
- Superior water resistance
- Permits hardware options to address specific requirements
- Stronger, more durable screens
- Allows custom designs with standard product
- Multiple options to answer economic and aesthetic concerns



Series 590 Thermal
2 7/16" Heavy Commercial Fixed & Projected Replication Window



PERFORMANCE DATA

| PROJECTED HEAVY COMMERCIAL | | | CASEMENT HEAVY COMMERCIAL | | |
|----------------------------|------------------------|--|---------------------------|------------------------|--|
| AIR INFILTRATION | <.10 CFM/SF @ 6.24 PSF | | AIR INFILTRATION | <.10 CFM/SF @ 6.24 PSF | |
| WATER | NO LEAKAGE @ 12.0 PSF | | WATER | NO LEAKAGE @ 12.0 PSF | |
| STRUCTURAL | ±135 PSF | | STRUCTURAL | ±120.0 PSF | |
| CRF-FRAME (1503.98) | 44 ^f | | CRF-FRAME (1503.1) | 51 ^f | |
| CRF-GLASS (1503.98) | 71 ^f | | CRF-GLASS (1503.1) | 55 ^f | |

A = Estimated values and/or designations
B = Non-standard size or configuration
C = Dual glazed
D = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear
E = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" air, 1/4" clear
F = 1" Insulated - 1/4" clear (Low Emissivity), 1/2" argon, 1/4" clear
G = 1" Insulated - 1/4" clear, 1/2" air, 1/4" clear (Low Emissivity)

| TOP-HINGED OUTSWING HEAVY COMMERCIAL | | |
|--------------------------------------|-------------------------|--|
| AIR INFILTRATION | <.10 CFM/SF @ 6.24A PSF | |
| WATER | NO LEAKAGE @ 6.0A PSF | |
| STRUCTURAL | ±60.0A PSF | |
| CRF-FRAME (1503.1) | 46 ^{f, D} | |
| CRF-GLASS (1503.1) | 42 ^{f, D} | |

| 590 THERMAL U-FACTORS* | | | | |
|-----------------------------|------------------------|---------------------|----------------------------|--------------------------|
| CENTER OF GLASS U-FACTOR | CONFIGURATION AND SIZE | | | |
| | FIXED** 47" X 59" | FIXED 60" X 108" | PROJECT OUT** 59" X 24" | PROJECT OUT 60" X 66" |
| 0.47 | 0.54 | 0.52 | 0.53 | 0.56 |
| 0.34 | 0.44 | 0.41 | 0.55 | 0.45 |
| 0.29 | 0.41 | 0.36 | 0.51 | 0.41 |
| 0.25 | 0.38 | 0.33 | 0.49 | 0.38 |
| 0.20 | 0.34 | 0.29 | 0.46 | 0.34 |

* Based on NFRC 100
** NFRC Gateway size

| S-590 HARDWARE CHART | BUTT HINGES | 4-BAR ARMS | FRICTION ADJUSTER | KEY RELEASE LIMIT ARM | ROTOR OPERATOR* | CAM HANDLE | POLE RING CAM HANDLE | POLE RING PULL** | ACCESS CONTROLLED LOCK | LIFT LOCK |
|---------------------------------------|----------------|---------------|----------------------|-----------------------------|--------------------|---------------|----------------------------|---------------------|------------------------------|--------------|
| PROJECT-OUT | | \$ | | | | \$ | O | O | O | |
| CASEMENT OUTSWING WITH 4-BAR ARMS | | \$ | | | | \$ | O | | O | O |
| CASEMENT OUTSWING WITH BUTT HINGES | \$ | | \$ | O | O | \$ | O | | O | O |

Some size restrictions may apply depending on hardware selected.
* Casements requiring roto operators will be furnished with lift locks, providing vents meet minimum width requirements.
** Pole ring pull will be furnished on project out vents when optional pole ring cam handle is selected.

O - Optional
\$ - Standard
Blank - N/A

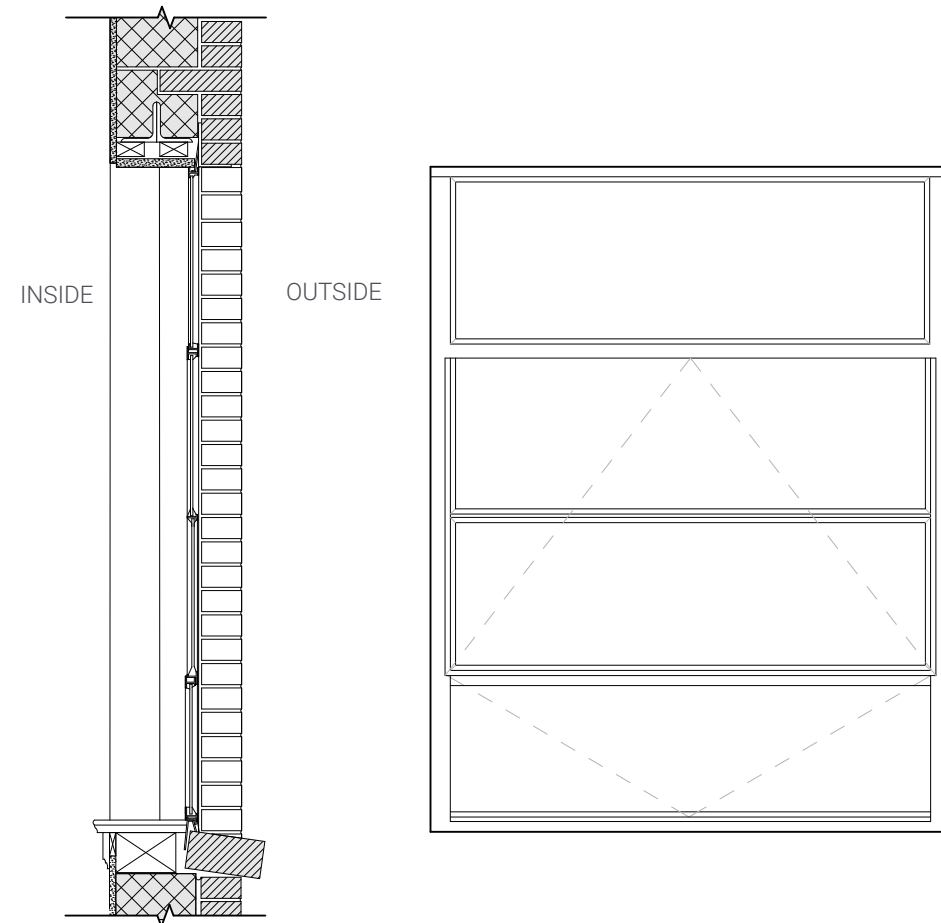
| S-590 GLAZING CHART | POLYCARBONATE | | | GLASS OR PANEL | | | | | | | | | | | | | | | |
|---------------------------------|---------------|-------|------|----------------|-------|-------|-------|------|------|------|------|------|------|----|--------|--------|--------|--------|----|
| | 1/8" | 3/16" | 1/4" | 1/8" | .156" | 3/16" | .200" | 1/4" | 1/4" | 1/2" | 5/8" | 3/4" | 7/8" | 1" | 1-1/8" | 1-1/4" | 1-1/2" | 1-3/4" | 2" |
| MONOLITHIC & INSULATED GLASS | | | | | | | | | | | | | | A | | | | | |

* Obscure glass thickness
** Laminated glass thickness

A - Available glazing option
I - Internal blinds can be used with this type of dual glazing
Blank - N/A

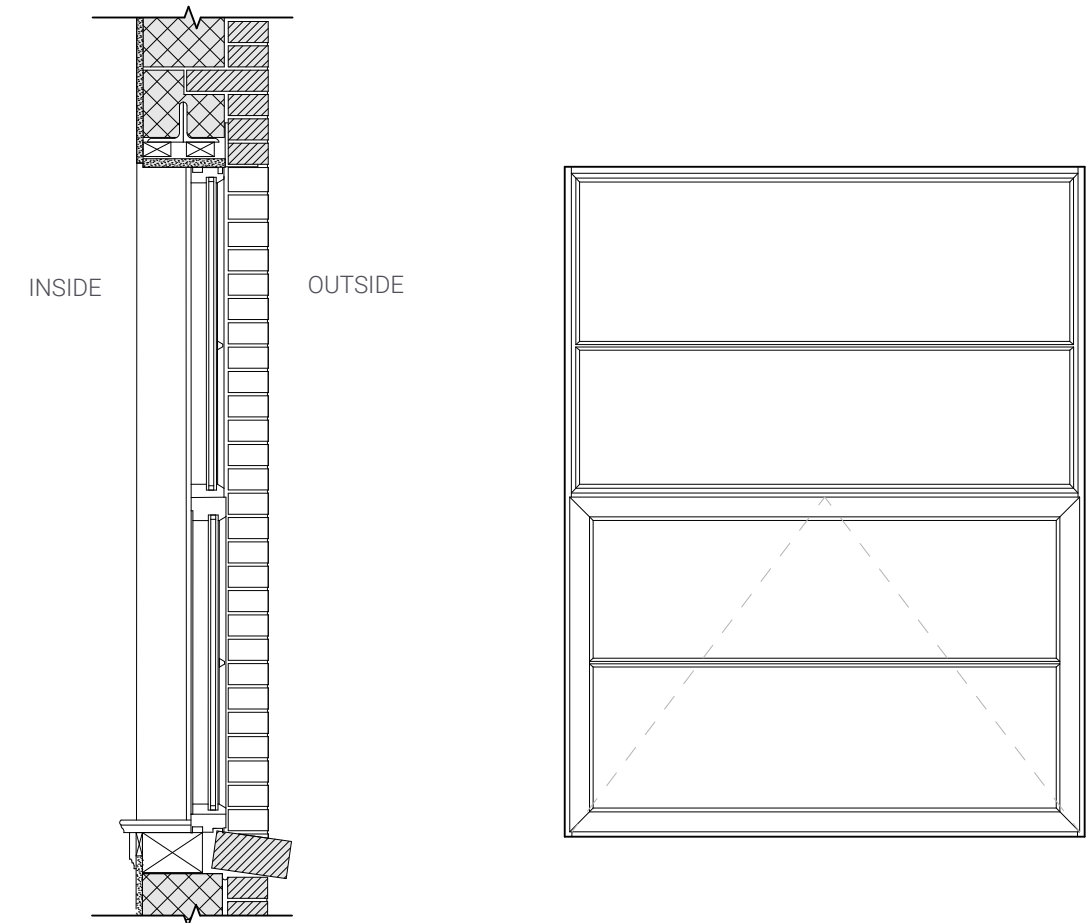


PROPOSED WINDOW PRODUCT | EFCO CORPORATION



EXISTING THIRD FLOOR WINDOW DETAILS

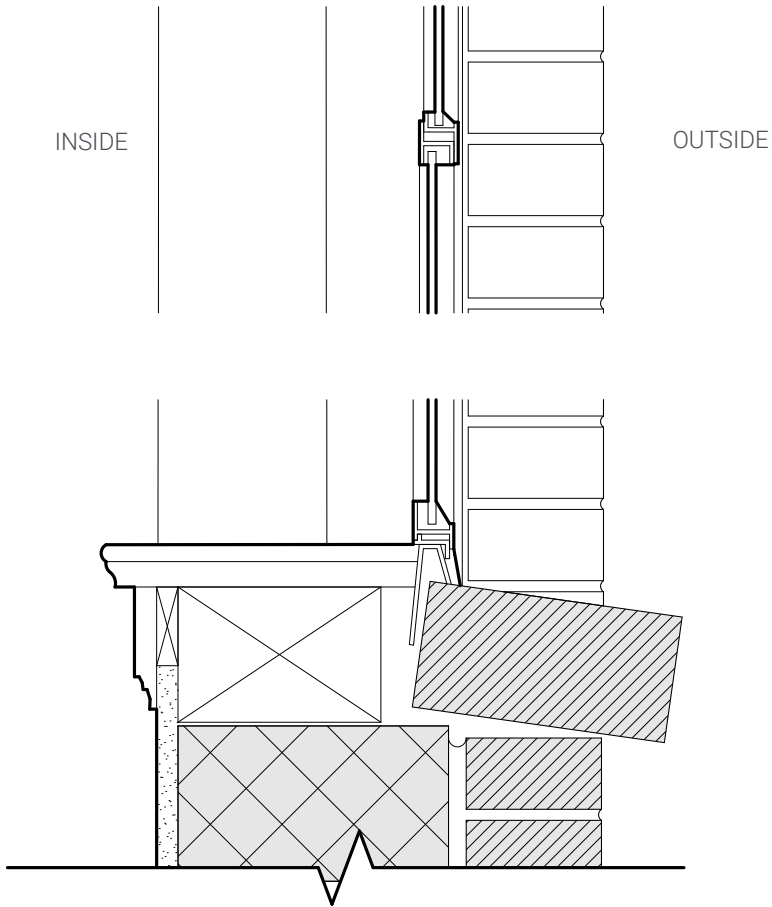
Scale 3/4" = 1'-0"



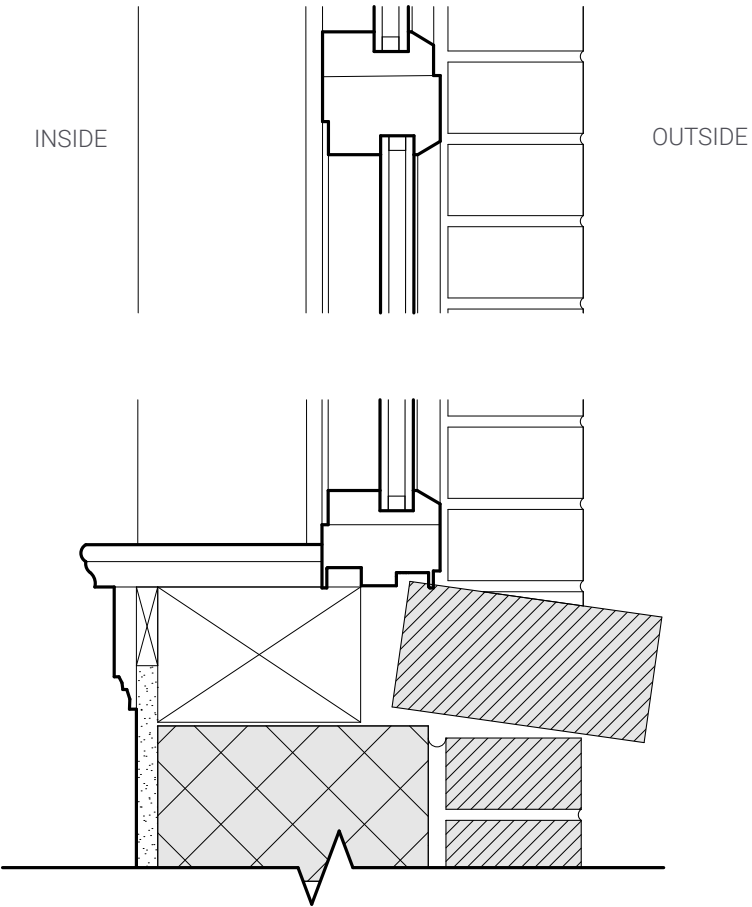
PROPOSED REPLACEMENT WINDOW DETAILS

Scale 3/4" = 1'-0"

PROPOSED WINDOW PRODUCT | EFCO CORPORATION



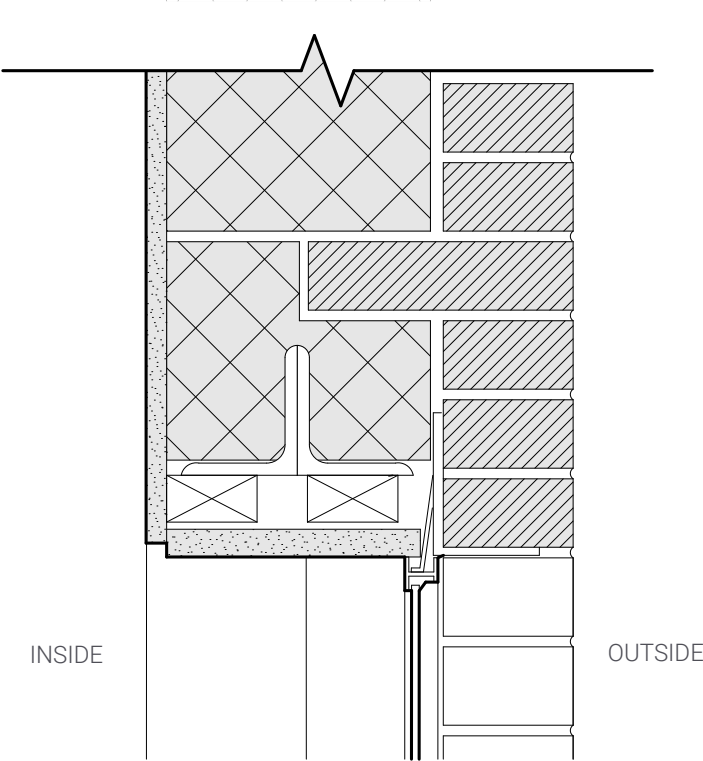
EXISTING WINDOW SILL TYP
Scale 1 1/2" = 1'-0"



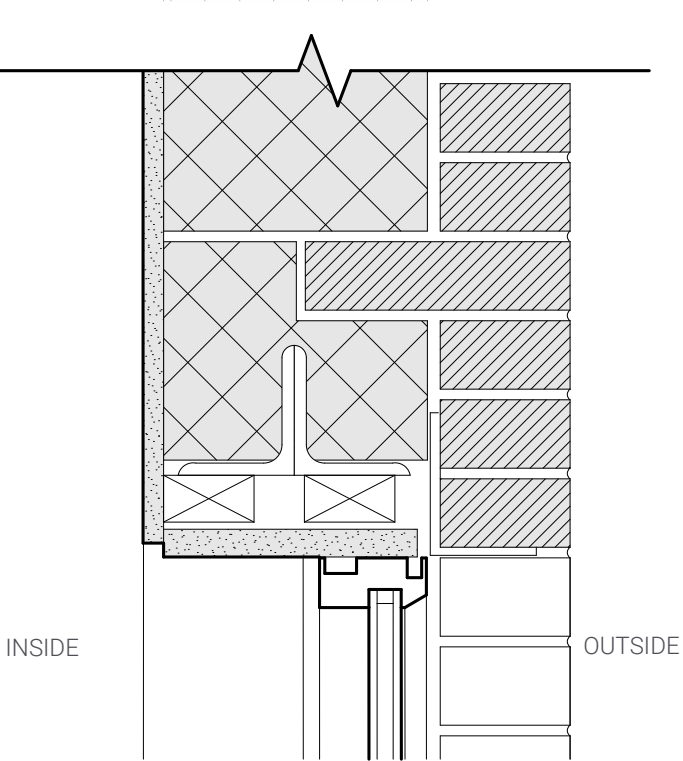
PROPOSED WINDOW SILL TYP
Scale 1 1/2" = 1'-0"



PROPOSED WINDOW PRODUCT | EFCO CORPORATION

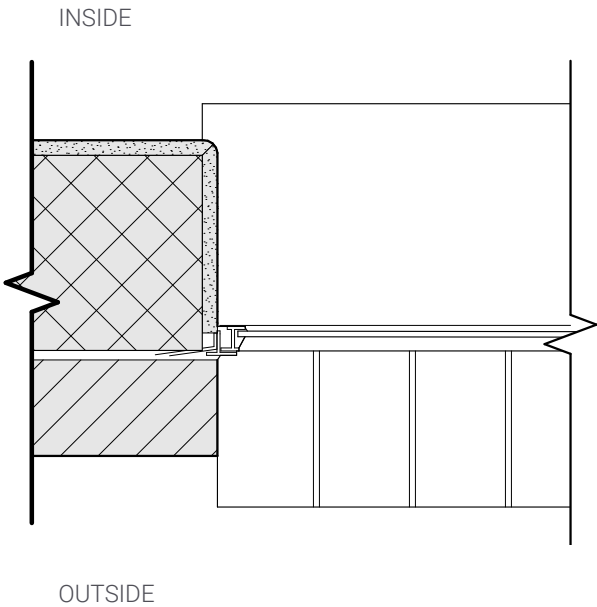


EXISTING WINDOW HEAD TYP
Scale 1 1/2" = 1'-0"

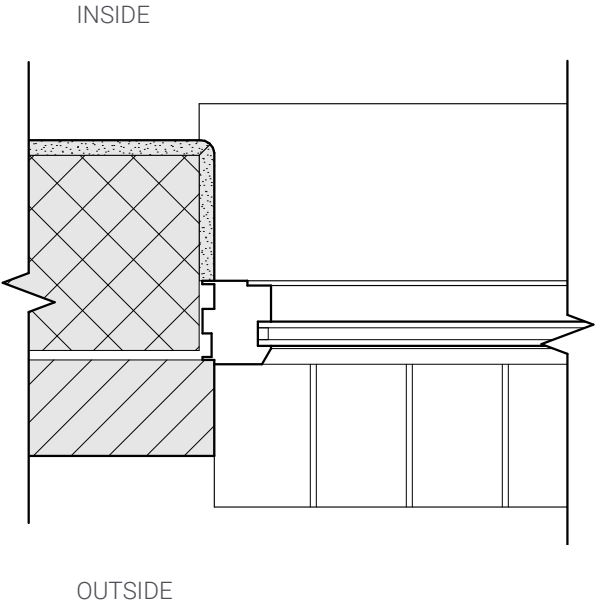


PROPOSED WINDOW HEAD TYP
Scale 1 1/2" = 1'-0"

PROPOSED WINDOW PRODUCT | EFCO CORPORATION



EXISTING WINDOW JAMB TYP
Scale 1 1/2" = 1'-0"



PROPOSED WINDOW JAMB TYP
Scale 1 1/2" = 1'-0"